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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/819,554	03/28/2001	Xavier Ducloux	PF010030	8997

7590 07/14/2004

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EXAMINER

SENF, BEHROOZ M

ART UNIT PAPER NUMBER

2613

DATE MAILED: 07/14/2004

14

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/819,554

Applicant(s)

DUCLOUX ET AL.

Examiner

Behrooz Senfi

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-9 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's arguments, see (Brief no. 13), filed 7 May 2004, with respect to claims 1 – 5 and 7 – 9 have been fully considered and are persuasive. Therefore, The finality of that action (paper no. 8, dated 11/5/2003) is withdrawn.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 - 5, 7 - 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu et al (US 6,573,945) in view of Dieterich (US 6,233,278).

Regarding claim 1, Wu '945 discloses "an image (HDTV) split into panels" (i.e. fig. 1), and "an encoder being assigned to each panels" (i.e. fig. 1, 120 – 127), and "two or more panels constituting over the length of the image" reads on (i.e. fig. 1, eight panels), and a "same video buffering" (i.e. fig. 1, 140). Wu '945 fails to explicitly teach, "rate controller/bit budget for video buffer" as claimed. However, such features are well known and used as evidenced by Dieterich '278 (i.e. col. 14, lines 21 – 36). Therefore, taking the combined teaching of Wu '945 and Dieterich '278 as a whole, it would have been obvious to one skilled in the art at the time of the invention was made to modify the system of Wu '945 as taught by Dieterich '278 by using bit budget management for optimizing coding efficiency while controlling overflow and underflow conditions of the buffer (i.e. col. 14, lines 26 – 27 of Dieterich).

Regarding claim 7, the limitations claimed are substantially similar to claim 1, therefore the grounds for rejecting claim 1, also apply here. The additional limitation “each encoder is coupled to another encoder” reads on combination teaching of Wu '945 and Dieterich '278 (Wu; fig. 1, encoder 120 – 127).

Regarding claim 3, Official Notice: the limitation as claimed, “coding cost is calculated on the basis of pre-analysis of the image” is well-known in the prior art of the record. See supporting reference Ducloux et al (US 6,148,107, col. 8, lines. 45+).

Regarding claim 8, combination of Wu '945 and Dieterich '278 teaches, “multiplexing bus linking the encoders” (Wu, fig. 1, 130).

Regarding claims 2 and 4, combination of Wu '945 and Dieterich '278 teaches, “cost of coding in claim 2 and complexity in claim 4” (i.e. col. 14, lines 1 – 5 of Dieterich).

Regarding claim 5 and 9, the limitations claimed “preset bit rate for horizontal band is in part the preset bit rate for the complete image, dividing by the number of horizontal bands” would have been obvious, since that is the definition of known mathematical equation for finding average, and the “dynamic allocation of the preset bit rate for the complete image depends on the complexity” reads on (i.e. col. 14, lines 1+ Dieterich).

Allowable Subject Matter

4. Claim 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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5. The following is an examiner's statement of reasons for allowance:

The prior art of the record fails to anticipate nor rendered obvious the claimed limitation
preset bit rate of a horizontal band is equal to: $D_i = (p \cdot x_i/x + (1-p) \cdot n/N) D$,

Where: D_i is the bit-rate of the horizontal band

D is the bit-rate for the global image

x_i is the complexity of the horizontal band

x is the total complexity of the image

N is the number of panels per horizontal band

n is the total number of panels in the image

P is the percentage of bit-rate assigned to dynamic allocation relative to
the global bit-rate.

Any comments considered necessary by applicant must be submitted no later
than the payment of the issue fee and, to avoid processing delays, should preferably
accompany the issue fee. Such submissions should be clearly labeled "Comments on
Statement of Reasons for Allowance."

Conclusion

6. Any inquiry concerning this communication or earlier communications
from the examiner should be directed to **Behrooz Senfi** whose telephone
number is **(703)305-0132**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, **Chris Kelley** can be reached on **(703)305-4856**.

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Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Or faxed to:

(703) 872-9314

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relative to the status of the application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

B. S. B. S.

7/9/2004


CHRIS KELLEY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600